Pending Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for discovering a power level in a diode discovery circuit comprising:

~~transmiting~~ transmitting a pulse signal from a diode discovery device on a first line;

receiving the pulse signal in the diode discovery device on a second line;

measuring a time to charge a capacitor in response to applying power to determine the power level; and

applying power in response to comparing the transmitted pulse signal to the received pulse signal and to measuring the time.

2. (Original) The method of claim 1 in which the pulse signal includes a pseudo random generated 11-bit word.

3. (Original) The method of claim 2 in which the pseudo random generated 11-bit word is generated by a recursive linear function.

4. (Original) The method of claim 3 in which the recursive linear function is X(n) = X[n-11] + X[n-9] (modulo 2).

5. (Original) The method of claim 2 in which the pseudo random generated 11-bit word is seeded by a port number of the diode discovery device.

6. (Original) The method of claim 1 further comprising repeating the transmitting and receiving.

7. (Original) A computer program product residing on a computer readable medium having instructions stored thereon which, when executed by the processor, cause the processor to:

transmit a pulse signal from a diode discovery device on a first line;

receive the pulse signal in the diode discovery device on a second line;

measure a time to charge a capacitor in response to applying power to determine the power level; and

apply power in response to comparing the transmitted pulse signal to the received pulse signal and to the measured time.

8. (Original) The computer program product of claim 7 in which the pulse signal includes pseudo random generated 11-bit word.

9. (Original) The computer program product of claim 8 in which the pseudo random generated 11-bit word is generated by a recursive linear function.

10. (Original) The computer program product of claim 9 in which the recursive linear function is X(n) = X[n-11] + X[n-9] (modulo 2).

11. (Original) The computer program product of claim 8 in which the pseudo random generated 11-bit word is seeded by a port number of the diode discovery device.

12. (Original) A diode discovery system comprising:

a diode discovery process controller to:

transmit a pulse signal from the controller on a first line;

receive the pulse signal in the controller on a second line;

measure a time to charge a capacitor in a diode detection circuit in response to applying power to determine the power level;

apply power in response to comparing the transmitted pulse signal to the received pulse signal and to the measured time;

a voltage source connected to the controller; and

a power converter linked to the diode detection circuit.

13. (Original) The system of claim 12 in which the pulse signal includes pseudo random generated 11-bit word.

14. (Original) The system of claim 13 in which the pseudo random generated 11-bit word is generated by a recursive linear function.

15. (Original) The system of claim 14 in which the recursive linear function is X(n) = X[n-11] + X[n-9] (modulo 2).

16. (Original) The system of claim 13 in which the pseudo random generated 11-bit word is seeded by a port number of the diode discovery device.

17. (Original) The system of claim 12 further comprising means for repeating the pulse signal.